

Shimadzu Electronic Balances General Catalog



1875 ● Establishment of SHIMADZU CORPORATION

1920 ● 1918 Commence Tortion Balance and Top-pan Balance production

1930 **Model 5** Chemical Balance

1930 **Model 5** Chemical Balance

1939 Large-Capacity Balance

1940 **DODIQ** Direct-Reading Balance

1950 **DODIQ** Direct-Reading Balance

1958 **Type L** Direct-Reading Balance

1958 **Type L** Direct-Reading Balance

1960 **AL-3** Automatic Direct-Reading Balance

1965 **AL-7** Automatic Direct-Reading Balance

1967 **LU-T1100** Top-loading Direct-Reading Balance

1970 **AL-8** Automatic Direct-Reading Balance (All-digital display)

1971 **Digibalance D-1003** Electronic Balance

1973 **C-160** Direct-Reading Carat Balance

1976 **NL-200P** Direct-Reading Balance

1980 **EB-2800M** Electronic Animal Balance

1981 **AEL-160** Electronic Analytical Balance

● 1985 **AEL-200** Electronic Analytical Balance (Full-range electro-magnetic)

● 1985 **PSC** Fully-Automatic Calibration Based on Temperature Change Detection

● 1989 **EB-K** Precision Platform Balances with **OPF** (later renamed UniBloc)

1990 **AEM-5200** Micro Balance

● 1997 First Electronic Balances with **WindowsDirect**

2003 New UniBloc Balance Line-up

2000 **MOC-120H** UniBloc Moisture Balance

2007 **TX/TXB** UniBloc Top-Loading Balance

2010 **ATX/ATY** UniBloc Analytical Balance

2011 **MOC63u** UniBloc Moisture Balance

SHIMADZU ELECTRONIC BALANCES

Professional in Measurement



New Product

UniBloc Moisture Analyzer MOC63u debut!!



Excellent performance for a wide variety of applications in multiple industries



Food

- Quality Assurance
- Harvest Inspection



Environmental

- Polluted Sludge Measurement
- Biofuel Measurement



Chemical

- Paint Quality Control
- Material Inspection



Pharmaceutical

- Drug Quality Assurance
- Cosmetics Inspection

AUW/AUX/AUY Series



UW/UX Series



TW/TX/TXB Series



BW-K/BX-K Series



SHIMADZU ELECTRONIC BALANCES

SHIMADZU: A Tradition of Weighing Expertise

Shimadzu Corporation was established in 1875 in Kyoto, Japan, as one of the pioneers of scientific precision instruments.

Top-pan and torsion balance production started in 1918, and equal-beam analytical balances were introduced in 1925. Since their release, the continuous improvement of Shimadzu balances has contributed to research and development across all industries.

Around the turn of the 20th Century, precision weighing was a time-consuming practice performed only by experienced operators. Placing the sample and small masses on pans hung from a beam scale with a moving indicator was a tedious process. Shimadzu strove continuously to streamline weighing procedures. The introduction of the direct reading analytical balance (patented in Japan in 1948) signified a new era in weighing technology. In the Type L balance, the sensitive mass-loading work was replaced by convenient dial operations. Users reduced weighing time by 66%, and consequently reduced demand for conventional balances. Shimadzu then added the top-loading direct reading balance with Roberval's mechanism in 1959. Until recently many of these instruments were still utilized in modern laboratories.

Shimadzu continued to pioneer new technologies, releasing its first electronic balance in 1971—the Digibalance.

This release marked a milestone in precision weighing, introducing simplicity and ease of use to analytical weighing. Six years later (1977), the application of microprocessors in electronic balances further enhanced weighing performance. The compact ED Series provided substantial improvements in sensitivity, resolution, and stability.

More recently, Shimadzu has introduced user-friendly instruments and features to the market, such as : the temperature-based fully-automatic calibration in 1985, the first one-piece forcecell (OPF, later renamed UniBloc) in 1989, the high-sensitivity AEM-5200 Micro Balance in 1993, and the unique WindowsDirect feature perfectly suited for the computerized laboratory of the 21st Century.

Moving forward, Shimadzu is committed to providing innovative products for the analytical marketplace.

One of the latest achievements is MOC63u series, High-performance Moisture Analyzer with advantages of UniBloc and applicable for a wide application area.

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Excellent performance for multiple industries

Capacity/Minimum display



Pharmaceutical industry

- Sample preparation in R&D laboratories
- Quality assurance of drugs
- Material inspection



AUV220D
Capacity: 220g/82g
Minimum Display: 0.1mg/0.01mg
► P.10



UW1020H
Capacity: 1020g
Minimum Display: 0.001g
► P.14



UW6200H
Capacity: 6200g
Minimum Display: 0.01g
► P.14



MOC63u
Capacity: 60g
Minimum Display: 0.001g/0.01%
► P.22



Food industry

- Quality assurance of processed food
- Inspection for harvest before export
- Packaging final products



MOC63u
Capacity: 60g
Minimum Display: 0.001g/0.01%
► P.22



AUV220
Capacity: 220g
Minimum Display: 0.1mg
► P.12



TX3202L
Capacity: 3200g
Minimum Display: 0.01g
► P.16



Chemical industry

- Reagent preparations
- Manufacturing process inspection



AUV220
Capacity: 220g
Minimum Display: 0.1mg
► P.12



UX420H
Capacity: 420g
Minimum Display: 0.001g
► P.14



UX4200H
Capacity: 4200g
Minimum Display: 0.01g
► P.14



MOC63u
Capacity: 60g
Minimum Display: 0.001g/0.01%
► P.22



Electronic and semiconductor

- Piece counting for small parts in factories
- Measurement of thin film on the surface of silicon wafer
- Pass/fail by checkweighing



ATX224
Capacity: 220g
Minimum Display: 0.1mg
► P.13



UX420H
Capacity: 420g
Minimum Display: 0.001g
► P.14



UX4200H
Capacity: 4200g
Minimum Display: 0.01g
► P.14



TX323L
Capacity: 320g
Minimum Display: 0.001g
► P.16



TX3202L
Capacity: 3200g
Minimum Display: 0.01g
► P.16



BL320H
Capacity: 320g
Minimum Display: 0.001g
► P.19



ELB300
Capacity: 300g
Minimum Display: 0.01g
► P.20



Jewelry market

- Jewelry making
- In retail shop
- Purity check



TXC623L / TWC623L
Capacity: 620ct
Minimum Display: 0.001ct
► P.17



TX323L
Capacity: 320g
Minimum Display: 0.001g
► P.17



TX3202L
Capacity: 3200g
Minimum Display: 0.01g
► P.17



UX420H
Capacity: 420g
Minimum Display: 0.001g
► P.14


































UX4200H
Capacity: 4200g
Minimum Display: 0.01g
► P.14




TXB622L
Capacity: 620g
Minimum Display: 0.01g
► P.17

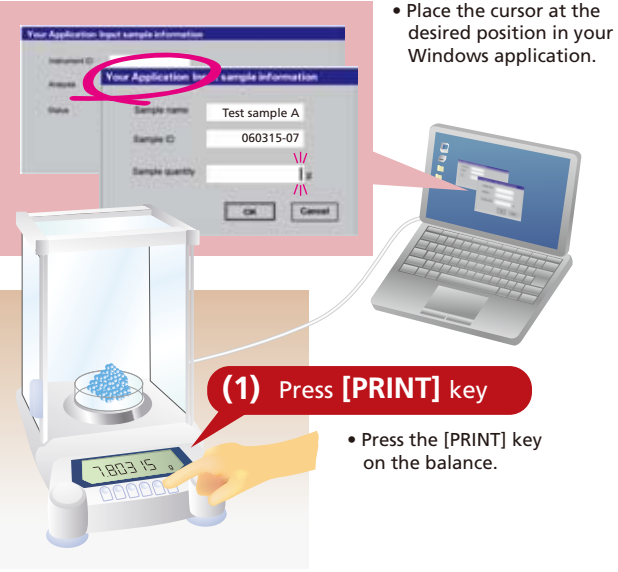
Quick reference by capacity and minimum display

| Minimum display \ Capacity | 0.01mg | 0.1mg | 0.001g | 0.01g | 0.1g | | 1g | |
|----------------------------|--|---|--|---|---|--|--|--------------------|
| 30g | AUW120D*  | Semi-micro Balances (P.11) | | | | | | |
| 50g | AUW220D*  | | ATX84  ATY64  | | | | | |
| 100g | | AUW120D*  AUW/AUX/AUY120  AW/AX/AY120 ATX/ATY124  | | ELB120 | | | | |
| 200g | | AUW220D*  AUW/AUX/AUY220  ATX/ATY224  AW/AY220 AX200 | UW/UX220H  BL220H TX/TW223L  | ELB200 TXB222L | | | | |
| 300g | Analytical Balances (P.12, P.13 and P.19) | AUW/AUX320  AW320 | BL320H TX/TW323L  | ELB300 BL320S | | | | |
| 400g | | | UW/UX420H  TX/TW423L  | UW/UX420S  TXB422L | | | | |
| 600g | | | UW/UX620H  UW/UX820H  UW/UX1020H  | BL620S TXB622L UW/UX820S  | ELB600 TXB621L | ELB600S | | |
| 1200g | | | | | ELB1200 | Portable Electronic Balances (P.20) | | |
| 2000g | | | | UW/UX2200H  BL2200H TX2202L  | TXB2201L | | | ELB2000 |
| 3000g | | | | BL3200HL BL3200H TX3202L  | | | | ELB3000 BL3200S |
| 4000g | | Top-loading Balances UW/UX Series (P.14) TW/TX/TXB/TWC/TXC (P.16 and P.17) BL Series (P.19) | | UW/UX4200H  TX4202L  | TXB4201L | UW/UX4200S  | | |
| 6000g | | | | UW/UX6200H  | TXB6201L | UW/UX8200S  | ELB6000S TXB6200L | |
| 10000g | | | | | Precision Platform Balances (P.18) | | ELB12K BW/BX32KS  BW/BX52KS  | |
| | | | | | | | | |

*Dual-range models appearing twice for both ranges.

 UniBloc Family of Balances

WindowsDirect Experience it!



• Place the cursor at the desired position in your Windows application.

(1) Press [PRINT] key

• Press the [PRINT] key on the balance.

• The weighed result will be directly typed there.

(2) Sent as if typed from the computer keyboard !

Any application on Windows® :
e.g. Excel, Word etc.





All that you need to add is **just one cable!**

No communication software is required!

If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Features and Symbols



REDUCE MANUAL CALIBRATION WORK








-  **Perfect Self Calibration**
The balance self-calibrates when it detects temperature changes that would affect accuracy. Operator is released from constantly monitoring surrounding conditions.
-  **Clock-CAL**
Fully automated feature initiates self-calibration at set time intervals, using motor-driven internal calibration weight. Up to three automatic calibrations per day may be pre-set to coincide with work schedules or to meet specific quality goals.
-  **Internal Calibration**
Calibration can be performed any time with a simple push-button operation.
-  **One-lever CAL**
Single lever operation loads and unloads built-in calibration weight.







GLP, GMP, AND ISO9000 CONFORMANCE

-  **Calibration Report**
With optional printer connected to the balance, calibration reports which meet the requirements of GLP, GMP, and ISO9000 can be produced.
-  **Built-in Clock**
Date and time can be readily supplied by the balance.

APPLICATION SPECIFIC FEATURES

-  **WindowsDirect** (See p.9)
Weighed result is directly typed at the cursor position of any application on Windows® OS. No communication software is required.
-  **Built-in RS-232C Interface**
RS-232C interface is a standard feature.

-  **Piece Counting Mode**
Piece counting function is a standard feature.
-  **Analog Bar Graph Display**
Allows viewing of remaining capacity.
-  **Specific Gravity Measurement**
Software for specific gravity measurement is pre-installed. Simply add optional specific gravity kit for efficient measurements.
-  **Standard Below-weigh Hook**
Measurement beneath the balance is possible.
-  **Interval Timer Output**
Data can be automatically output at pre-set time intervals.
-  **Auto Print**
Data can be automatically output as each measurement is made.
-  **Checkweighing**
Utilized in quality control applications.

-  **Dry Battery Operation**
Portable for use in the field.
- OTHER FEATURES**
-  **UniBloc**
Single-block technology brings high performance and durability.
-  **Backlight**
Easy to read in any environment.
-  **All-metal Housing**
All metal construction for high durability.
-  **Easy Setting**
Best fit to weighing application
-  **Menu Operation Key**
Easy to operate key layout

UniBloc Family of Balances

UniBloc Analytical Balances

AUW-D series dual-range semi-micro balances
AUW/AUX/AUY series
ATX/ATY series

UniBloc Top-loading Balances

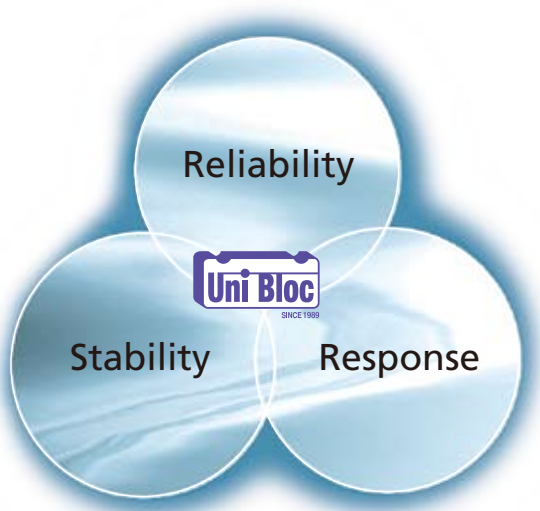
UW/UX/TW/TWC/TX/TXC series

UniBloc Precision Platform Balances

BW-K/BX-K series

UniBloc Electronic Moisture Balances

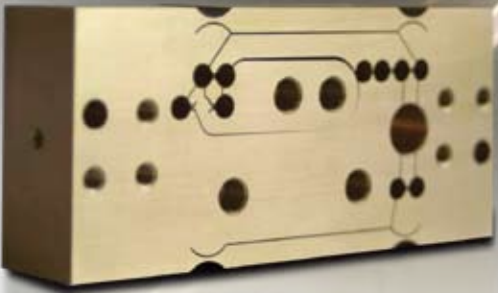
MOC-120H/MOC63u



Shimadzu introduced one piece force cell technology for precision balances in 1989. Today's UniBloc is created by high-precision electric discharge wire processing applied to a block of aluminum alloy, and replaces the conventional electro-magnetic balance sensor assembly. UniBloc's compact, uniform structure ensures stable temperature characteristics, excellent response time and stable corner-load performance. The UniBloc design permits a consistency of production that assures reliability and a long operational life.

The updated UniBloc technology expanded the UniBloc balance line up, which now ranges from semi-micro with minimum display of 0.01 mg to precision platform balances up to 52 kg in capacity.

One piece force cell patented in USA in 1989, No. 4799561, in China in 1991, No. 12729, in Japan in 1995, No. 1905686



UniBloc Analytical Balances

AUW-D series dual-range semi-micro balances
AUW/AUX/AUY series analytical balances

Excellent Weighing Performance

- Compact UniBloc mechanism and digital processing technology produce fast response and stability at the same time.
- Microprocessor digital control can be set to automatically provide the most suitable data processing for the installation environment and weighing application.

User-friendly Features

- Weighing work is made easy by the smooth door movement. It is easy to remove and replace the door rails for cleaning.
- The embossed key panel sheet provides clear clicking response as operated. The key operations can be confirmed with a gentle beeping sound, too.
- Level adjustment can be performed with ease.

For Application

- Shimadzu's unique WindowsDirect is a standard feature for all the UniBloc Analytical Balances. Measurement results can be transmitted to Excel or other Windows applications without any software installation to your computer. All you have to add is one RS-232C cable.

WindowsDirect works with Windows® 95, 98, NT4.0, 2000, ME and XP. PC must be IBM PC/AT compatible.

If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

- Piece counting, various mass units, below-weigh hook, specific gravity measurement software are all standard features.



Dual-range semi-micro balances

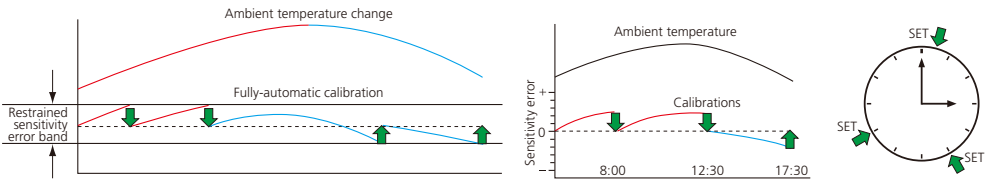
AUW-D Series

AUW-D dual-range semi-micro balances are the first five-decimal balances with the advantages of UniBloc one-piece force cell technology.

Choose one of the two models according to your field requirements. Excellent response, stability and zero return performance – in a semi-micro balance.

Choice of fully-automatic calibrations: PSC and Clock-CAL

Operator can choose from two types of fully-automatic span calibration methods. "PSC" is initiated based on temperature change detection, and "Clock-CAL" operates at user pre-set times (up to three times a day).



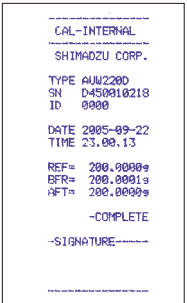
GLP/GMP/ISO calibration report

Calibration report can be automatically printed out with the optional electronic printer. Date and time are also output to meet GLP/GMP/ISO requirements.

WindowsDirect (See p.9)

Weighed data can be directly typed into any Windows application and no interface software is required. If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

| Model | Capacity | Minimum display | Pan size(mm) | Internal calibration | Internal calibration modes | WindowsDirect |
|---------|----------|-----------------|--------------|----------------------|---|---------------|
| AUW220D | 220g/82g | 0.1mg/0.01mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key touch | ✓ |
| AUW120D | 120g/42g | 0.1mg/0.01mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key touch | ✓ |



UniBloc Analytical Balances

Analytical Balances

AUW/AUX/AUY Series

AUW

PSC

Clock CAL

Motor CAL

ISO

Built-in

Windows DIRECT

RS-232C INTERFACE

PCS

Analog display

Specific Gravity

Auto Print

Back Light

METAL BODY

AUX

PSC

Motor CAL

ISO

Built-in

Windows DIRECT

RS-232C INTERFACE

PCS

Analog display

Specific Gravity

Auto Print

METAL BODY

AUY

Windows DIRECT

RS-232C INTERFACE

PCS

Analog display

Specific Gravity

Auto Print

METAL BODY

AUW/AUX/AUY models are the single-range analytical balances engineered with the UniBloc technology. This provides especially fast response and superb stability.

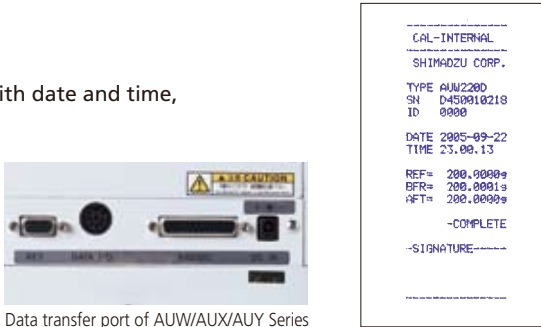
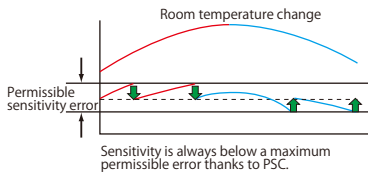
PSC, fully-automatic calibration (AUW/AUX models)
Calibration is carried out when temperature change has been detected.

Clock-CAL, fully-automatic calibration (AUW model only)
Calibration carried out at user-preset times (up to three times a day). Operators can work without unexpected interruptions.

GLP/GMP/ISO calibration report (AUW/AUX models)
Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

WindowsDirect (See p.9)
Weighed data can be directly typed into any Windows application and no interface software is required. If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Backlight LCD (AUW model only)
LCD with backlight can be read with ease and comfort under any lighting condition.



Static Remover STABLO-EX (p.25)



| Model | Capacity | Minimum display | Pan size (mm) | Internal calibration | Internal calibration modes | WindowsDirect |
|--------|----------|-----------------|---------------|----------------------|---|---------------|
| AUW320 | 320 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key touch | ✓ |
| AUW220 | 220 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key touch | ✓ |
| AUW120 | 120 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key touch | ✓ |
| AUX320 | 320 g | 0.1 mg | 80 dia | ✓ | PSC, any time with key touch | ✓ |
| AUX220 | 220 g | 0.1 mg | 80 dia | ✓ | PSC, any time with key touch | ✓ |
| AUX120 | 120 g | 0.1 mg | 80 dia | ✓ | PSC, any time with key touch | ✓ |
| AUY220 | 220 g | 0.1 mg | 80 dia | | | ✓ |
| AUY120 | 120 g | 0.1 mg | 80 dia | | | ✓ |

Analytical Balances

ATX/ATY Series

New

ATX

Motor CAL

ISO

HIGH LOG

Windows DIRECT

PCS

Auto Print

New

ATY

ISO

HIGH LOG

Windows DIRECT

PCS

Auto Print

High specification and low cost with UniBloc.

Touch-key calibration
Automated calibration can be started by pressing keys. (ATX series)
Also, your external calibration weights can be used for span calibration. (All models)

Easy Setting Best fit to weighing application
Quickly adjust the desired ratio of stability and response for every application, even during measurement, with one-touch operation.

Expanded Piece Counting function
Unit weights of up to 5 different samples can be easily entered, stored and recalled for use.

Comparator function
Compare samples to target values or pass/fail criteria and clearly indicate the results.

Formulation mode
Convenient for making many measurements of minute samples and seeking the total mass.

WindowsDirect Communication Function
Send balance data to Excel or other Windows applications without any data communication software installation required. By combining standard AutoPrint functions with typical spreadsheet functions, even difficult applications can be easily automated
*I/O-RS cable is needed.

Very large size pan
It enables the use of a large flask. (91 dia)

| Model | Capacity | Minimum display | Pan Size (mm) approx. | Main Body Dimensions (mm) approx. | Weight (kg) approx. | Power Requirement | Internal Calibration |
|--------|----------|-----------------|-----------------------|-----------------------------------|---------------------|-------------------|----------------------|
| ATX84 | 82 g | 0.1mg | 91 dia | 213(W)×356(D)×338(H) | 6.2 | 12V, 1A | ✓ |
| ATX124 | 120 g | 0.1mg | 91 dia | 213(W)×356(D)×338(H) | 6.2 | 12V, 1A | ✓ |
| ATX224 | 220 g | 0.1mg | 91 dia | 213(W)×356(D)×338(H) | 6.2 | 12V, 1A | ✓ |
| ATY64 | 62 g | 0.1mg | 91 dia | 213(W)×356(D)×338(H) | 6.0 | 12V, 1A | |
| ATY124 | 120 g | 0.1mg | 91 dia | 213(W)×356(D)×338(H) | 6.0 | 12V, 1A | |
| ATY224 | 220 g | 0.1mg | 91 dia | 213(W)×356(D)×338(H) | 6.0 | 12V, 1A | |



Data transfer port of ATX/ATY Series

UniBloc Top-Loading Balances

Top-Loading Balances

UW/UX Series



UW



UX



The new line of Shimadzu top-loading balances are engineered with the UniBloc mechanism resulting in unrivaled response, stability and durability. Powerful features support any imaginable weighing application. UW Series includes internal calibration and fully-automatic calibration functions.



Large-pan model

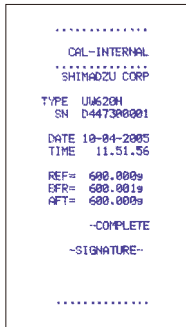


Small-pan model
(minimum display 0.01g)



Small-pan model
(minimum display 0.001g)

*The delivered windbreak may differ from the photo



Example of calibration record

GLP/GMP/ISO calibration report

Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

Analog display modes

Bar graph display

Bar graph clearly indicates the total weight (including the tare) as a portion of the balance capacity.

Target weighing

Select a target weight and tolerance. The display clearly indicates when they are reached.

Checkweighing

Set an upper and lower threshold. The display continually indicates whether the sample is within the range "GO", over range "HI" or under range "LO". Choose one of two checkweighing bar graph display modes.

The results can also be output to external devices.

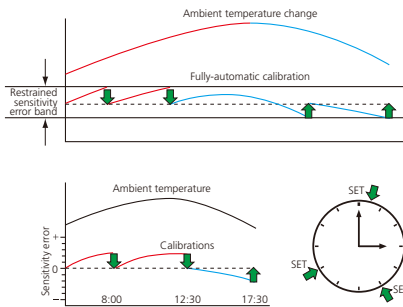
PSC, fully-automatic calibration (UW only)

Calibration is carried out when temperature change has been detected.

Clock-CAL, fully-automatic calibration (UW only)

Calibration carried out at user-preset times (up to three times a day).

Operators can work without unexpected interruptions.



New Line up!

UW820H/UW1020H
UX820H/UX1020H



WindowsDirect (See p.9)

Weighed data can be directly typed into any Windows application and no interface software is required. If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

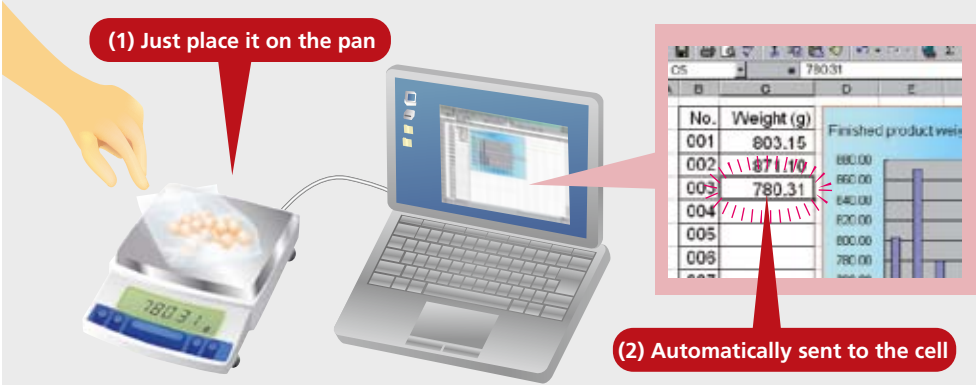
Auto Print

Automatically outputs data as each measurement is made. Combination with WindowsDirect makes up a handy weigh-and-record system.

With just a cable!



Auto Print and WindowsDirect



All that you need to add is **just one cable!**

No communication software is required!

Available as standard with
AUW-D/AUW/AUX/AUY,
ATX/ATY, UW/UX,
TW/TX/TWC/TXC/TXB,
BW-K/BX-K series,
MOC-120H, MOC63u

If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Backlight LCD

LCD with backlight can be read with ease and comfort under any lighting condition.

Unit conversion and piece counting function

Weight value can be presented in 22 different units and modes, including percentage, carat, specific gravity, lb, oz, and others. Users can pre-register any combination of units depending on their needs. Piece counting function is standard.



Data transfer port of UW/UX Series

| Model | Pan type | Capacity | Minimum display | Pan size (mm) approx. |
|--------------------|-----------|----------|-----------------|-----------------------|
| UW220H* | Small-pan | 220 g | 0.001 g | 108×105 |
| UW420H* | Small-pan | 420 g | 0.001 g | 108×105 |
| UW620H* | Small-pan | 620 g | 0.001 g | 108×105 |
| New UW820H | Small-pan | 820 g | 0.001 g | 108×105 |
| New UW1020H | Small-pan | 1020 g | 0.001 g | 108×105 |
| UW2200H | Large-pan | 2200 g | 0.01 g | 170×180 |
| UW4200H | Large-pan | 4200 g | 0.01 g | 170×180 |
| UW6200H | Large-pan | 6200 g | 0.01 g | 170×180 |
| UW420S | Small-pan | 420 g | 0.01 g | 108×105 |
| UW820S | Small-pan | 820 g | 0.01 g | 108×105 |
| UW4200S | Large-pan | 4200 g | 0.1 g | 170×180 |
| UW8200S | Large-pan | 8200 g | 0.1 g | 170×180 |

*Models with minimum display of 0.001 g come with a standard windbreak.

| Model | Pan type | Capacity | Minimum display | Pan size (mm) approx. |
|--------------------|-----------|----------|-----------------|-----------------------|
| UX220H* | Small-pan | 220 g | 0.001 g | 108×105 |
| UX320G | Small-pan | 320 g | 0.001 g | 108×105 |
| UX420H* | Small-pan | 420 g | 0.001 g | 108×105 |
| UX620H* | Small-pan | 620 g | 0.001 g | 108×105 |
| New UX820H | Small-pan | 820 g | 0.001 g | 108×105 |
| New UX1020H | Small-pan | 1020 g | 0.001 g | 108×105 |
| UX2200H | Large-pan | 2200 g | 0.01 g | 170×180 |
| UX3200G | Large-pan | 3200 g | 0.01 g | 170×180 |
| UX4200H | Large-pan | 4200 g | 0.01 g | 170×180 |
| UX6200H | Large-pan | 6200 g | 0.01 g | 170×180 |
| UX420S | Small-pan | 420 g | 0.01 g | 108×105 |
| UX820S | Small-pan | 820 g | 0.01 g | 108×105 |
| UX4200S | Large-pan | 4200 g | 0.1 g | 170×180 |
| UX8200S | Large-pan | 8200 g | 0.1 g | 170×180 |

UniBloc Top-Loading Balances

Top-Loading Balances

TW/TX/TXB Series

TW

TX

TXB

Menu CAL

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

Back Light

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

Back Light

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

DRY Battery

Back Light



The beginning of the new standard.
Extremely capable, but easy to operate.

Internal Calibration (TW series only)
Calibration can be performed any time with a simple push-button operation.

Easy Setting
Easy Setting Best fit to weighing application
Quickly adjust the desired ratio of stability and response for every application, even during measurement, with one touch operation.provided by the built-in clock.

Menu Operation Key
Menu Operation Key Easy to operate key layout
Menu navigation keys are separated from weighing operation keys and arranged in a familiar 5-way navigation circle. Up, Down, Right, Left and Enter are the simple steps of menu operation.

WindowsDirect (See p.9)
Weighed data can be directly typed into any Windows application and no interface software is required.
If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Can be used anywhere with battery power (TXB only)
Battery power the TXB series balances by AC adapter or batteries.

Power saving function
If you don't operate for a given length time, power (TXB) or display (TX) can be turned off automatically.

| Model | Pan type | Capacity | Minimum display | Pan size (mm) approx. |
|---------|-----------|----------|-----------------|-----------------------|
| TX223L | Small-pan | 220 g | 0.001 g | ø110 |
| TX323L | Small-pan | 320 g | 0.001 g | ø110 |
| TX423L | Small-pan | 420 g | 0.001 g | ø110 |
| TX2202L | Large-pan | 2200 g | 0.01 g | 167(W)×181(D) |
| TX3202L | Large-pan | 3200 g | 0.01 g | 167(W)×181(D) |
| TX4202L | Large-pan | 4200 g | 0.01 g | 167(W)×181(D) |
| TW223L | Small-pan | 220 g | 0.001 g | ø110 |
| TW323L | Small-pan | 320 g | 0.001 g | ø110 |
| TW423L | Small-pan | 420 g | 0.001 g | ø110 |

| Model | Pan type | Capacity | Minimum display | Pan size (mm) approx. |
|----------|-----------|----------|-----------------|-----------------------|
| TXB222L | Small-pan | 220 g | 0.01 g | ø110 |
| TXB422L | Small-pan | 420 g | 0.01 g | ø110 |
| TXB622L | Small-pan | 620 g | 0.01 g | ø110 |
| TXB2201L | Large-pan | 2200 g | 0.1 g | ø160 |
| TXB4201L | Large-pan | 4200 g | 0.1 g | ø160 |
| TXB6201L | Large-pan | 6200 g | 0.1 g | ø160 |
| TXB621L | Small-pan | 620 g | 0.1 g | ø110 |
| TXB6200L | Large-pan | 6200 g | 1 g | ø160 |



Jewelry & Gold Balances

TWC/TXC/TW/TX/TXB Series

TWC

TXC

TW

TX

TXB

Menu CAL

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

Back Light

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

Back Light

Menu CAL

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

Back Light

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

Back Light

ISO

Windows DIRECT

RS-232C INTERFACE

PCS

HI GO LO

AUTO PRINT

DRY Battery

Back Light



Weighing gold in a local unit
Various weighing units including Tael (Hong Kong, Taiwan, Singapore, Malaysia, China) plus user-defined unit are available.

Counting coins or parts
Piece counting function is standard.

Pass/fail checkweighing
According to the user-preset thresholds, GO (pass), HI (over) or LO (under) will be displayed.

Production/sales management using computer
WindowsDirect function directly types the weighed results to any Windows application you are using (e.g. Excel) without interface software required. (TX series)
If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Internal Calibration (TW/TWC series only)
Calibration can be performed any time with a simple push-button operation.

Battery operation (TXB)
TXB may be operated with dry batteries. Suitable for sites where reliable power supply is not available.

- *1 If you need PSC or timer calibration, please select UW series.
- *2 If a second display is required, please select UX/UW series.

| Model | Capacity | Minimum display | Pan size (mm) approx. |
|---------|----------|-----------------|-----------------------|
| TXC323L | 320 ct | 0.001 ct | 80 dia |
| TXC623L | 620 ct | 0.001 ct | 80 dia |
| TWC323L | 320 ct | 0.001 ct | 80 dia |
| TWC623L | 620 ct | 0.001 ct | 80 dia |
| TX223L | 220 g | 0.001 g | 110 dia |
| TX323L | 320 g | 0.001 g | 110 dia |
| TX423L | 420 g | 0.001 g | 110 dia |
| TX2202L | 2200 g | 0.01 g | 167(W)×181(D) |
| TX3202L | 3200 g | 0.01 g | 167(W)×181(D) |
| TX4202L | 4200 g | 0.01 g | 167(W)×181(D) |
| TW223L | 220 g | 0.001 g | 110 dia |
| TW323L | 320 g | 0.001 g | 110 dia |
| TW423L | 420 g | 0.001 g | 110 dia |

| Model | Capacity | Minimum display | Pan size (mm) approx. |
|----------|----------|-----------------|-----------------------|
| TXB222L | 220 g | 0.01 g | 110 dia |
| TXB422L | 420 g | 0.01 g | 110 dia |
| TXB622L | 620 g | 0.01 g | 110 dia |
| TXB2201L | 2200 g | 0.1 g | 160 dia |
| TXB4201L | 4200 g | 0.1 g | 160 dia |
| TXB6201L | 6200 g | 0.1 g | 160 dia |
| TXB621L | 620 g | 0.1 g | 110 dia |
| TXB6200L | 6200 g | 1 g | 160 dia |



Data transfer port of TWC/TXC/TW/TX Series



Data transfer port of TXB Series

UniBloc Precision Platform Balances

Precision Platform Balances

BW-K/BX-K Series

BW-K         

BX-K         

The Shimadzu Precision Platform balances have been engineered with the innovative UniBloc mechanism since 1989. Powerful features support any imaginable weighing application. BW-K Series includes internal calibration weight.



BW-K Series

GLP/GMP/ISO calibration report

Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.

Analog display modes

Bar graph display

Bar graph clearly indicates the total weight (including the tare) as a portion of the balance capacity.

Target weighing

Select a target weight and tolerance. The display clearly indicates when they are reached.

Checkweighing

Set an upper and lower threshold. The display continually indicates whether the sample is within the range, "GO"; over range, "HI"; or under range, "LO". Choose one of two checkweighing bargraph display modes.

WindowsDirect (See p.9)

Weighed data can be directly typed into any Windows application and no interface software is required. If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Large-size calibration weight (BW-K only)

For accurate internal calibration. Calibration can be performed by simple lever operation.

| Model | Capacity | Minimum display | Pan size (mm) approx. | Calibration weight |
|--------|----------|-----------------|-----------------------|--------------------|
| BW12KH | 12 kg | 0.1 g | 345×250 | Built-in |
| BW22KH | 22 kg | 0.1 g | 345×250 | Built-in |
| BW32KH | 32 kg | 0.1 g | 345×250 | Built-in |
| BW32KS | 32 kg | 1 g | 345×250 | Built-in |
| BW52KS | 52 kg | 1 g | 345×250 | Built-in |

| Model | Capacity | Minimum display | Pan size (mm) approx. | Calibration weight |
|--------|----------|-----------------|-----------------------|--------------------|
| BX12KH | 12 kg | 0.1 g | 345×250 | External |
| BX22KH | 22 kg | 0.1 g | 345×250 | External |
| BX32KH | 32 kg | 0.1 g | 345×250 | External |
| BX32KS | 32 kg | 1 g | 345×250 | External |
| BX52KS | 52 kg | 1 g | 345×250 | External |



Data transfer port of BW-K/BX-K Series

Analytical Balances, Top-Loading Balances

Analytical Balances

AW/AX/AY Series

AW           

AX         

AY      





AW Series

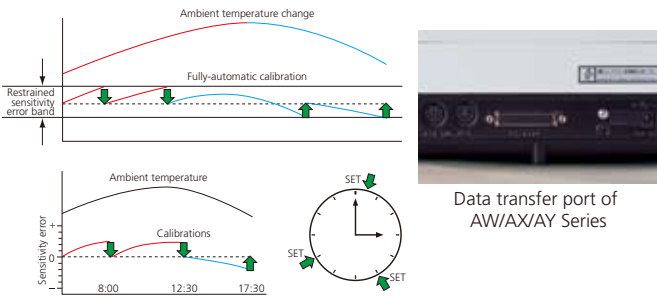
AX Series

AY Series

 **Fully-automatic calibration; PSC (AW only)**
Calibration is carried out when temperature change has been detected.

 **Clock-CAL function (AW only)**
Calibration carried out at user-preset times (up to three times a day). Operators can work without unexpected interruptions.

 **GLP/GMP/ISO calibration report**
Meets requirements of GLP/GMP/ISO9000. Calibration reports can be output with date and time, provided by the built-in clock.



Data transfer port of AW/AX/AY Series

WindowsDirect (See p.9)

Weighed data can be directly typed into any Windows application and no interface software is required. If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Unit conversion

Automatic unit conversion at the push of a button. Carat, and other units are standard.

| Model | Capacity | Minimum display | Pan size (mm) | Internal calibration | Internal calibration modes | Windows Direct |
|-------|----------|-----------------|---------------|----------------------|-----------------------------------|----------------|
| AW320 | 320 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓ |
| AW220 | 220 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓ |
| AW120 | 120 g | 0.1 mg | 80 dia | ✓ | PSC, Clock-CAL, any time with key | ✓ |
| AX200 | 200 g | 0.1 mg | 80 dia | ✓ | any time with key touch | ✓ |
| AX120 | 120 g | 0.1 mg | 80 dia | ✓ | any time with key touch | ✓ |
| AY220 | 220 g | 0.1 mg | 80 dia | | | ✓ |
| AY120 | 120 g | 0.1 mg | 80 dia | | | ✓ |

Top-Loading Balances


BL Series BL3200HL only

High-resolution balances made affordable

Quick response

Very fast response for operator comfort and efficiency.

 **Piece counting function**
Piece counting function is standard.

 **Analog bar graph display**
Remaining weighing capacity can be seen at a glance.

Compact body

This electro-magnetic precision balance is as compact as a portable scale.



Large-pan model

Small-pan model

Small-pan model with windbreak

BL3200HL

| Model | Pan type | Capacity | Minimum display | Pan size (mm) approx. |
|----------|-----------|----------|-----------------|-----------------------|
| BL220H * | Small-pan | 220 g | 0.001 g | 100×100 |
| BL320H * | Small-pan | 320 g | 0.001 g | 100×100 |
| BL2200H | Large-pan | 2200 g | 0.01 g | 164×124 |
| BL3200H | Large-pan | 3200 g | 0.01 g | 164×124 |
| BL3200HL | Large-pan | 3200 g | 0.01 g | 164×124 |
| BL320S | Small-pan | 320 g | 0.01 g | 100×100 |
| BL620S | Large-pan | 620 g | 0.01 g | 164×124 |
| BL3200S | Large-pan | 3200 g | 0.1 g | 164×124 |

*Models with minimum display of 0.001 g come with a standard windbreak.



Data transfer port of BL Series

Portable Electronic Balances

Portable Electronic Balances

ELB Series



Optional battery operation makes it readily portable with no compromise in accuracy.



High sensitivity and stability

Improved internal resolution provides extra accuracy.

Quick response

Stable results are quickly displayed.

Various application modes

Piece counting, percent display, and specific gravity modes are easily accessible.

Standard specific gravity software

Optional specific gravity kit is available for extra efficiency.

Digital stability control

User-selectable parameters for high-vibration environments provide dependable results.

Two-way power supply

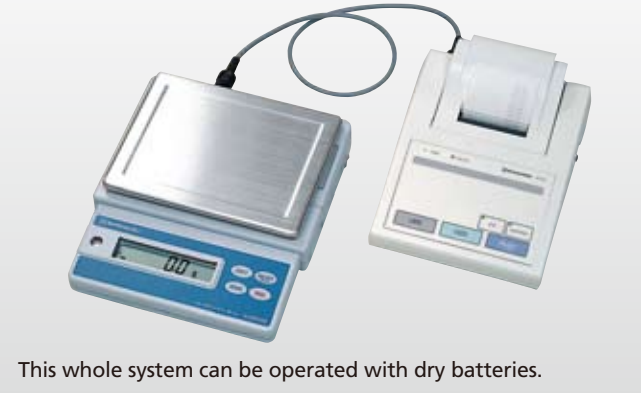
(AC or Battery operation)
Battery operation makes it portable



Data transfer port of ELB Series

| Model | Pan type | Capacity | Minimum display | Calibration weight |
|----------|-----------|----------|-----------------|--------------------|
| ELB120 | Small-pan | 120 g | 0.01 g | 110 dia |
| ELB200 | Small-pan | 200 g | 0.01 g | 110 dia |
| ELB300 | Small-pan | 300 g | 0.01 g | 110 dia |
| ELB600 | Large-pan | 600 g | 0.05 g | 170×130 |
| ELB600S | Large-pan | 600 g | 0.1 g | 170×130 |
| ELB1200 | Large-pan | 1,200 g | 0.1 g | 170×130 |
| ELB2000 | Large-pan | 2,000 g | 0.1 g | 170×130 |
| ELB3000 | Large-pan | 3,000 g | 0.1 g | 170×130 |
| ELB6000S | Large-pan | 6,000 g | 1 g | 170×130 |
| ELB12K | Large-pan | 12,000 g | 1 g | 170×130 |

Totally portable



This whole system can be operated with dry batteries.

Application Balances

UniBloc Electronic Moisture Balance

MOC-120H



Large sample pan and capacity allow any sample to be placed for the best drying conditions. Reliable UniBloc weighing mechanism and unique continuous auto-tare system assure accurate measurements.

Large sample pan and continuous auto-tare mechanism

A larger sample pan contributes to accurate measurements, but the larger heat capacity of it normally results in a larger zero drift in the precision weighing. The MOC-120H is equipped with a unique continuous auto-tare mechanism, which eliminates the zero drift continuously and ensures high accuracy, even with a larger sample pan.

UniBloc technology for precision weighing

Shimadzu's UniBloc cell is used as the core mechanism of the weighing part. Its uniform structure maintains the high performance of precision weighing under repeated heating / cooling.

Mid-wave infrared quartz heater

Mid-wave infrared quartz heater provides effective drying for a wide range of samples. Besides the excellent drying performance, it offers a long operational life of 20,000 to 30,000 hours. Therefore, the long-term operational cost is much lower than halogen lamp heaters.

Predictive measuring mode

The final result can be predicted from the drying process, saving time in repeated measurements.

WindowsDirect

(See p.9)
Complete sample data and instrument settings can be directly typed into any application on Windows and no interface software is required.
If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or USB port, please contact to our distributors.

Optional Accessories

Temperature calibration kit

The temperature at the sample position can be directly measured.



Electronic printer

Measurements can be printed out in tabular or graphical style.



Data transfer port of MOC-120H



MOC-120H with 130-mm sample pan

| | |
|--|--|
| Measuring method | Heat drying and weight loss |
| Sample pan size | 130 mm dia |
| Sample pan material | Stainless steel |
| Minimum display in weighing | 0.001 g |
| Measurement range of moisture content | 0.01% to 100.00 % |
| Moisture content minimum display | 0.01% |
| Sample capacity | 120 g |
| Measurement modes | Automatic or Timed ending modes, Standard, Rapid, Slow and Step drying modes, Predictive Measuring mode |
| Drying heater | Mid-wave infrared quartz heater |
| Temperature range | 30 to 200°C (by 1°C increments) |
| Digital output | Complete test data including instrument settings can be output. Optional electronic printer prints the data in tabular or graphical style. Excel® Spread Sheets can receive the data without communication software (WindowsDirect). |
| Dimensions | 220W × 415D × 190H (mm) |
| Weight | 4.5 kg |
| Operational temperature and humidity range | 5 to 40°C, 85% RH or lower |
| Power requirements | AC100 to 127 / 220 to 240V, 640W maximum |
| Stored procedures | 10 |
| Standard accessories | Sample pan 2 pcs, Sample pan handler 2 pcs, Aluminum sheet 20 pcs, Spoon, Spatula |
| Optional accessories | Temperature calibration kit, Electronic printer, RS-232C Cable |
| Consumables | Aluminum sheet 500 pcs, Printer paper for optional electronic printer |

Read instruction manual and understand before use of this instrument.

- Use this instrument for measurements in which water vaporizes from the sample under heating.
- The temperature of the heater installed in this instrument becomes higher than the set heating temperature for the sample.
- Any sample that is explosive, inflammable or may cause hazardous reaction under heating must not be measured with this instrument.

Application Balances

UniBloc Electronic Moisture Balance

New MOC63u Uni Bloc Windows DIRECT RS-232C INTERFACE Back Light

Easy operation —Automatic starting mode Easy-to-operate software and key layout. Automatic starting mode saves measurement time.



Backlight display Illuminated display provides comfortable display visibility in all settings.



Compact design MOC63u is one of the most compact instruments in its class. Width is only 202 (mm).

Data management —WindowsDirect and USB connection

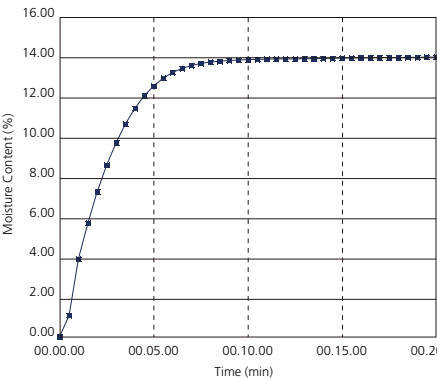
The measurement conditions and data can be stored in MOC63u. Data I/O for printer, RS-232C and USB connection for PC are available as standard. Send balance data to Excel or other Windows applications.



Data transfer port of MOC63u

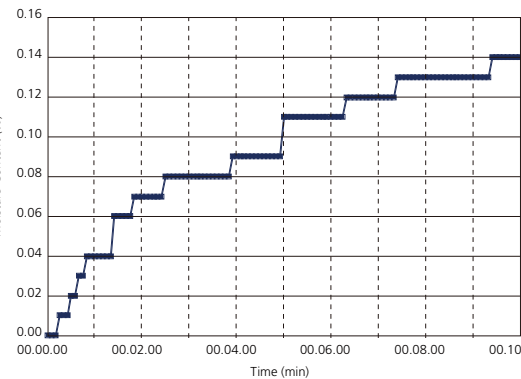
Measurement data With WindowsDirect

For food industry Measurement data of soft flour



Soft flour

For chemical industry Measurement data of resin pellet



Resin pellet



Large pan size Large sample pan: 95-mm diameter



Long lifetime halogen heater Halogen heater promises you quick and accurate measurement.



Maintenance It's very easy to clean up and replace the halogen lamp.

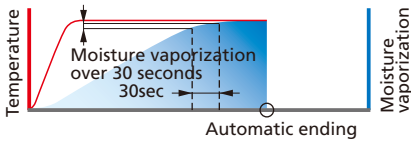


Measurement modes of MOC63u

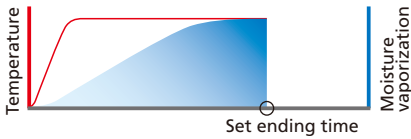
Choose the right measuring mode for your application.

Ending modes

Automatic ending mode Automatically ends measurement when moisture loss over the previous 30 seconds becomes smaller than specified percentage.

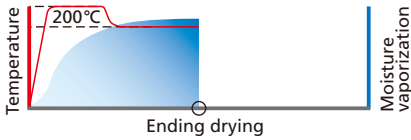


Timed ending mode Automatically ends measurement when the specified amount of time has elapsed.

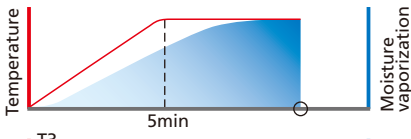


Alternate drying modes

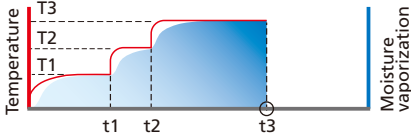
Rapid drying mode First dries with the highest temperature for the specified period, then shifts to the specified temperature shortening measurement time.



Slow drying mode Gently heats samples that might solidify at the surface or samples that reduce under high temperature.



Step drying mode Allows step-by-step changes in drying conditions. This feature is useful when measuring samples that contain a large amount of water.



Starting mode

Automatic starting mode Starts measurement immediately after closing the lid. It will save time in repeated measurement.



| | | |
|--|--|------------------------|
| Capacity | Max | 60 g |
| | Min | 0.02 g |
| Minimum readability | | 0.001 g |
| | | 0.01/0.1% (Selectable) |
| Repeatability | | 0.15% (2 g) |
| | | 0.05% (5 g) |
| | | 0.02% (10 g) |
| Drying Heater | Straight type halogen heater | |
| Power | 400 W | |
| Temperature range setting | 50–200°C (1°C increments) (There is a time restriction when exceeding 180°C.) | |
| Display | LCD with backlight | |
| Pan size | ø95 mm | |
| Dimensions (W×D×H) mm | 202 × 336 × 157 | |
| Weight | 4 kg | |
| Operational temperature and humidity range | 5 to 40°C, 85%RH or lower | |

| | |
|------------------------------------|--|
| Measurement modes | Standard (Easy start/Automatic end/Timed end) |
| | Rapid drying (Easy start/Automatic end/Timed end) |
| | Slow drying (Easy start/Automatic end/Timed end) |
| | Step drying (Easy start/Automatic end/Timed end) |
| Timer setting | 1–120 minutes or continuous (max 12 hours) |
| Interface | RS-232C (9-pin connector) I/O port |
| | USB port |
| Measurement conditions data memory | 10 |
| Data memory | 100 |
| Temperature calibration kit | Option |

Application Balances

SMK Specific Gravity Measurement Kits

Simple specific gravity meters based on precision balances.

Combine your Shimadzu balance with a specific gravity measurement kit for handy specific gravity measurements. Software for specific gravity measurement is pre-installed in all AUW-D / AUW / AUX / AUy, AW / AX / AY, UW / UX, and ELB Series.

Order one of the balances and the corresponding specific gravity measurement kit.

Liquid density can also be measured with a sinker (except for ELB Series).



| Model | Balance Series | Reduced Capacity (approx.) | Sample Phase | |
|----------|---------------------------------|----------------------------|--------------|--------|
| | | | Solid | Liquid |
| SMK-401 | AUW-D/AUW/AUX/AUY | 0 g | ✓ | ✓ |
| SMK-301 | AW/AX/AY | 0 g | ✓ | ✓ |
| SMK-101 | UW/UX (Capacity 2200 g or more) | 100 g | ✓ | ✓ |
| SMK-102 | UW/UX (Capacity 420 to 820 g) | 270 g | ✓ | ✓ |
| SMK-201S | ELB (Capacity 600 to 6000 g) | 200 g | ✓ | |

A sinker is additionally needed for liquid density measurement.

Electronic Balances for Weighing Animals

Animal Balances

UW

UX

BW-K

BX-K

Icons: PSC, Check CAL, Memo CAL, ISO, Built-In, Windows DIRECT, RS-232C INTERFACE, Analog display, HI GO LO, AUTO PRINT, Back Light, METAL BODY

* When animal weighing mode is not used, all the functions indicated on p.14 and p.18 are available.



UW Series BW-K plus Medium-size Animal Bucket BW-K plus Large Animal Bucket

Dedicated software functions quick and reliable results in live animal weighing applications

Upon removing the weighed animal, the balance is automatically reset to zero regardless of deposited material. Display response and stability can be optimized for the level of animal movement conditions.

| Model | Balance Series | Reduced Capacity (approx.) |
|----------------------------------|---------------------------------|---|
| Small Animal Bucket set | UW/UX (Capacity 2200 g or more) | Bottom 110 dia, Top 200 dia, Height 130 |
| Medium-size Animal Bucket set *1 | BW-K | Bottom 305 × 215, Top 377 × 245, Height 215 |
| | BX-K | |
| Large Animal Bucket set *2 | BW-K (Capacity 22 kg or more) | Bottom 335 × 245, Top 445 × 395, Height 345 |
| | BX-K (Capacity 22 kg or more) | |

*1 Capacity is reduced about 2 kg.
*2 Capacity is reduced about 6 kg.

Optional Accessories

Electronic Printer

EP-80

EP-90



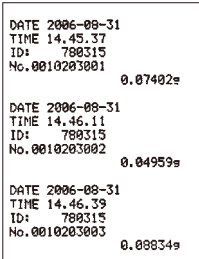
EP-80 EP-90

Common Features for EP-80 and EP-90

- Simple connection to balances using the cable provided.
- Uses normal paper, suitable for long-term storage compatible with GLP/GMP/ISO (dot impact method).
- Operation can be powered by AC adapter or dry batteries
- Hassle-free long-use printer paper rolls (8000 lines of printing with one roll).
- High-speed printing at approx. 3 lines/sec (printer mechanism performance).
- Installed with statistical calculation function as standard.
- Can be used simultaneously with Shimadzu's unique WindowsDirect function (output to computer).

EP-90 Capable of Attaching Sample/ID Numbers, Date and Time to Each Measurement Result

- Equipped with keyboard, capable of defining ID number (fixed input number), and sample number (number input and then increased automatically with each printing).
- Printing of date and time (when connected to an electronic balance with a built-in clock) can be controlled from the printer.
- Multiplication and comparator functionality built-in.



EP-90 print-out sample

Static Remover

STABLO-EX

Shimadzu's unique 2-WAY ionizer

Hand-held / On stand

Secure static removal

The excellent ion polarity balance achieved by the alternating method ensures:

- No inverse charging
- Wide angle static removal
- High performance maintained over a long period of use

Space saving design

Compact main unit requires minimal space. Holder height and angle are adjustable.



Quickly discharge container or bulk samples with fan ON.

For powdered samples, fan can be turned OFF.

As a handheld unit

Optional Accessories

Accessories for Shimadzu Balances

| | AUW-D AUW AUX AUY | ATX ATY | AW AX AY | UW UX | TX | TXB | BL | ELB | BW-K BX-K | MOC-120H | MOC63u |
|--|----------------------------|------------|----------------|-----------|-----------|-----------|----|-----|--------------|-----------|-----------|
| EP-80 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| EP-90 | | | | | | | | | | | |
| Printer for MOC-120H | | | | | | | | | | ✓ | |
| IFB-102A-UNC | [no need] | ✓ | [no need] | [no need] | [no need] | [no need] | ✓ | ✓ | [no need] | [no need] | |
| I/O-RS Cable | [no need] | ✓ | [no need] | [no need] | [no need] | [no need] | ✓ | ✓ | [no need] | [no need] | [no need] |
| AKB-301 Application key board | ✓ | | | ✓ | | | | | ✓ | | |
| Windbreak WBC-102 for UW/UX small-pan type | | | | ✓ | | | | | | | |
| Large size windbreak WBC-502 for UW/UX Series | | | | ✓ | | | | | | | |

Optional accessories list

| Balances | Optional accessories |
|-------------------------------------|---|
| AUW-D/ AUW / AUX / AUY Series | Electronic Printer EP-80 / EP-90 |
| | Foot Switch FSB-102TK (For taring) |
| | Foot Switch FSB-102PK (For printing) |
| | Specific Gravity Measurement Kit SMK-401 |
| | Application Keyboard AKB-301 |
| | RS-232C Cable, for IBM PC/AT Compatibles (25P-9P, Null modem, 1.5m) |
| | In-use Protective Cover (5 pcs) |
| ATX / ATY Series | Electronic Printer EP-80 / EP-90 |
| | IFB-102A-UNC |
| | USB Conversion Kit |
| | In-use Protective Cover (5 pcs) |
| | I/O-RS Cable |
| AW / AX / AY Series | Electronic Printer EP-80 / EP-90 |
| | Foot Switch FSB-102TK (For taring) |
| | Foot Switch FSB-102PK (For printing) |
| | Specific Gravity Measurement Kit SMK-301 |
| | RS-232C Cable, for IBM PC/AT Compatibles (25P-9P, Null modem, 1.5m) |
| | |

| Balances | Optional accessories |
|--|--|
| TX / TW / TXB / TXC / TWC Series | Electronic Printer EP-80 / EP-90 |
| | In-use Protective Cover (5 pcs) |
| | RS-232C Cable |
| BL Series | Electronic Printer EP-80 / EP-90 |
| | In-use Protective Cover (5 pcs) |
| | Simple Windbreak |
| | Lid for Simple Windbreak |
| | IFB-102A-UNC |
| | |
| | |
| ELB Series | Electronic Printer EP-80 / EP-90 |
| | RS-232C Interface IFB-102A-UNC |
| | In-use Protective Cover (5 pcs) |
| | Specific Gravity Measurement Kit SMK-201 (Cannot be used with small-pan models) |
| | |
| BW-K / BX-K Series | Electronic Printer EP-80 / EP-90 |
| | RS-232C Interface IFB-102A (for multiple connection) |
| | Foot Switch FSB-102PK (For printing) |
| | Application Keyboard AKB-301 |
| | |

| | AUW-D AUW AUX AUY | ATX ATY | AW AX AY | UW UX | TX | TXB | BL | ELB | BW-K BX-K | MOC-120H | MOC63u |
|--|------------------------------------|------------|----------------|----------|----|-----|----|-----|--------------|----------|--------|
| USB conversion kit with RS-232C cable | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | *1 | ✓ |
| Foot switch | for print FSB-102PK | ✓ | | ✓ | | | | | ✓ | | |
| | for TARE FSB-102TK | ✓ | | ✓ | | | | | ✓ | | |
| | for print FSB-101P | | | ✓ | | | | | | | |
| | for TARE FSB-101T | | | ✓ | | | | | | | |
| Specific gravity measurement kit | SMK-101, -102 (See p. 24) | | | ✓ | | | | | | | |
| | SMK-201 for ELB large-pan model | | | | | | | ✓ | | | |
| | SMK-301 (See p. 24) | | | ✓ | | | | | | | |
| | SMK-401 (See p. 24) | ✓ | | | | | | | | | |
| Battery for Balance The down trance is needed. | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | |
| Interface for comparator IFB-RY1 | | | | ✓ | | | | | | | |
| Comparator lamps 100V *2 (needs IFB-RY1 and RY1 Connection Cable) | | | | ✓ | | | | | | | |
| Comparator buzzer (needs IFB-RY1 and RY1 Connection Cable) | | | | ✓ | | | | | | | |

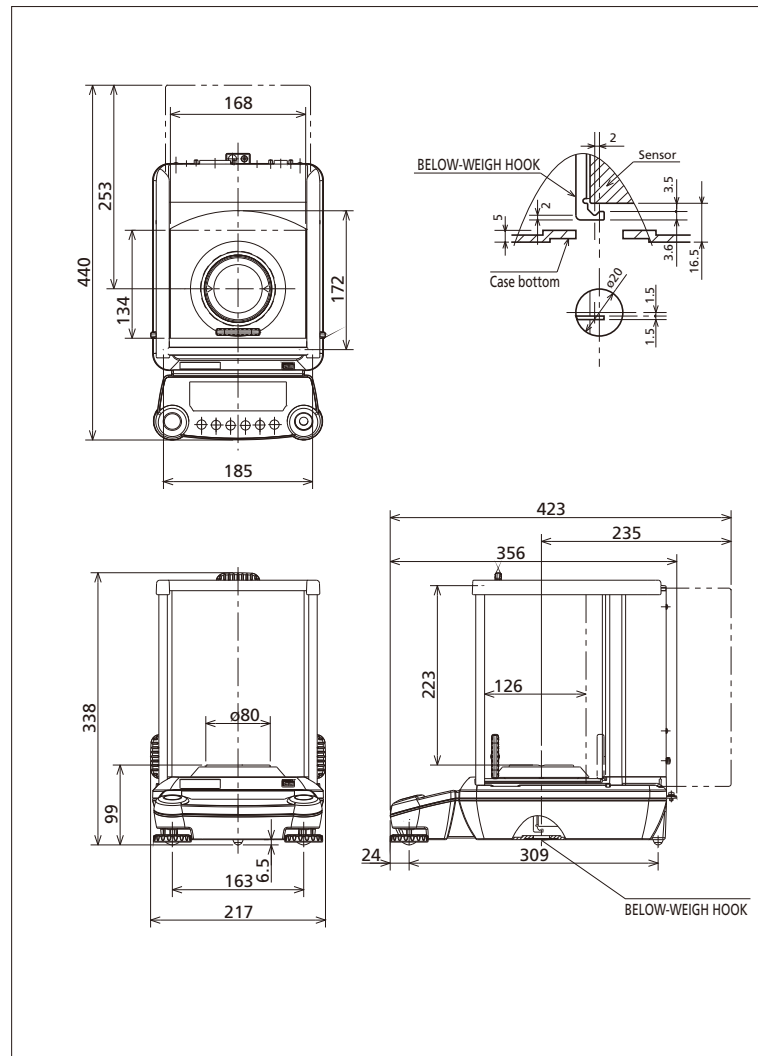
*1 USB serial adaptor and RS-232C cable for MOC are needed.
*2 Not available in EU.

| Balances | Optional accessories | |
|----------------|--|--|
| UW / UX Series | Electronic Printer EP-80 / EP-90 | Comparator Lamps 100V (needs IFB-RY1 and RY1 Connection Cable)*2 |
| | RS-232C Interface IFB-102A (for multiple connection) | Interface for comparator IFB-RY1 100V |
| | Small Size Windbreak (for models with capacity of 300 to 620 g only) (Std Acc. for models with readability of 1 mg) | Foot Switch FSB-102PK (For printing) |
| | | Foot Switch FSB-102TK (For taring) |
| | Glass Windbreak (for models with capacity of 220 to 820 g only) | RS-232C Cable, for IBM PC/AT Compatibles (25P-9P, Null modem, 1.5 m) |
| | Large Size Windbreak (for all models) | RS-232C Cable, for multiple connection (25P-25P, Null modem, 1.5 m) |
| | Specific Gravity Measurement Kit SMK-101 (for models with capacity of 2200 g and up only) | Application Keyboard AKB-301 |
| | | Remote Display Unit RDB-201 with operation keys |
| | Specific Gravity Measurement Kit SMK-102 (for models with capacity of 420 to 820 g only) | Remote Display Unit RDB-202 |
| | In-use Protective Cover (5 pcs) | Angle Adjuster and Wall Hook for Remote Display |
| MOC63u | Printer EP-80 | Temperature calibration kit |
| | Printer EP-90 | Sample pan (SUS) |
| | In-use protection cover for display (5 pcs) | RS-232C cable |
| | Aluminum sheet | USB connection cable |
| | Fiberglass sheet | Halogen heater for replacement |

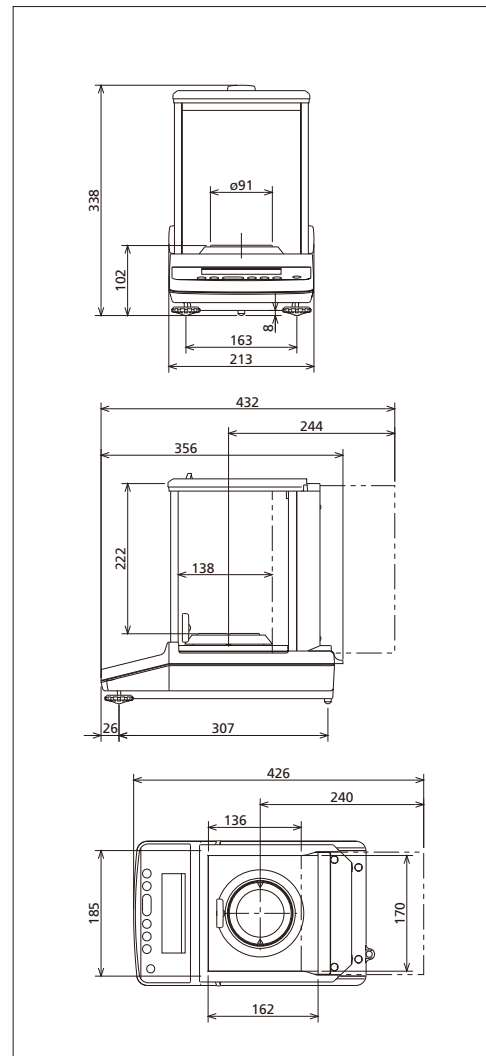
Physical Dimensions

Measurements in mm. 1mm=.03937"

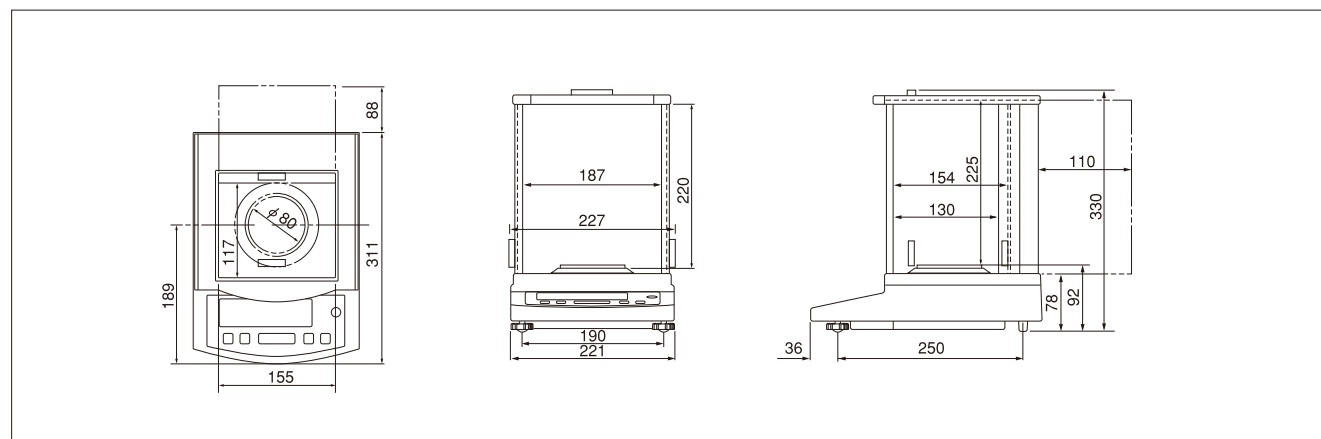
AUW-D/AUW/AUX/AUY Series



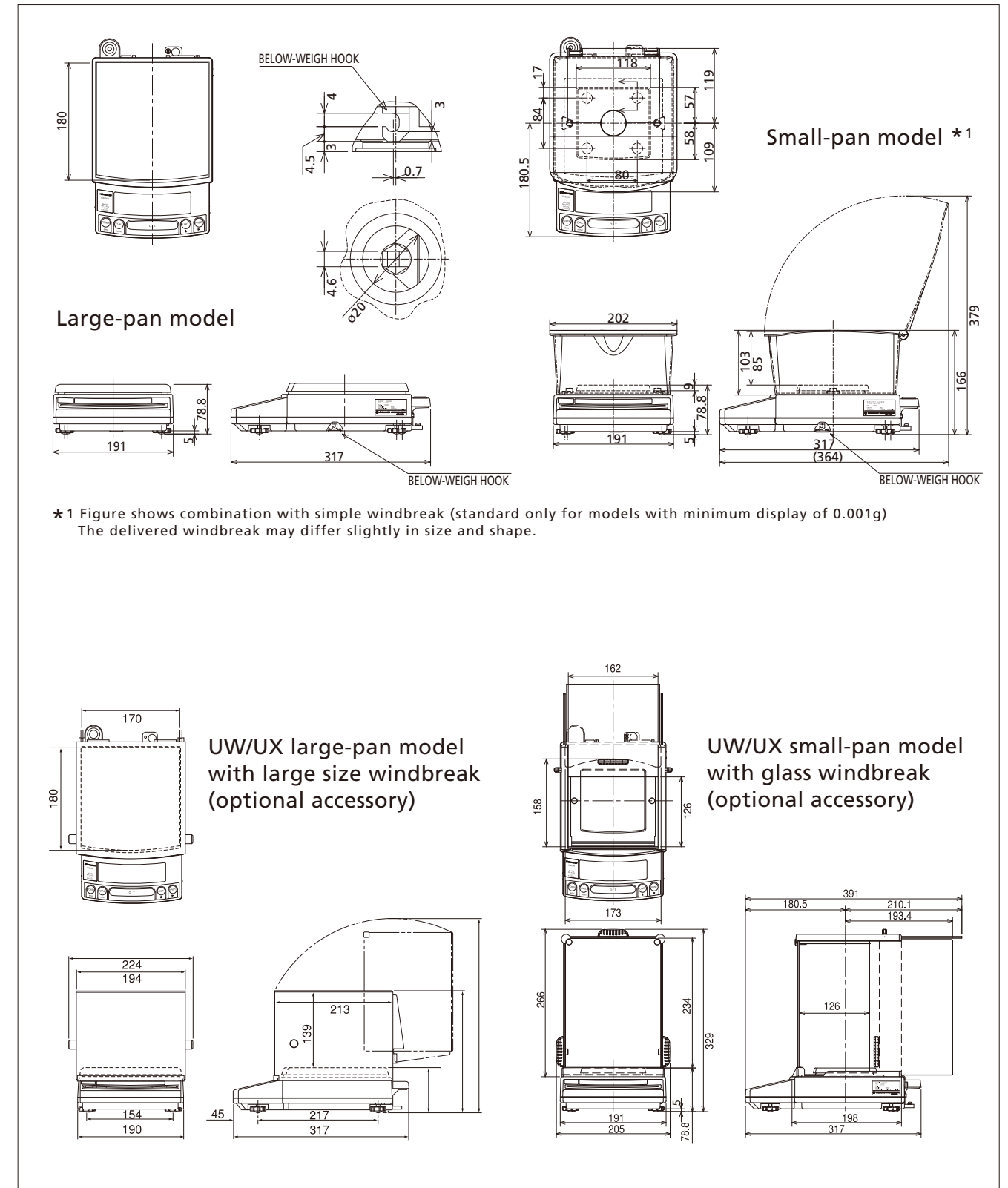
ATX/ATY Series



AW/AX/AY Series



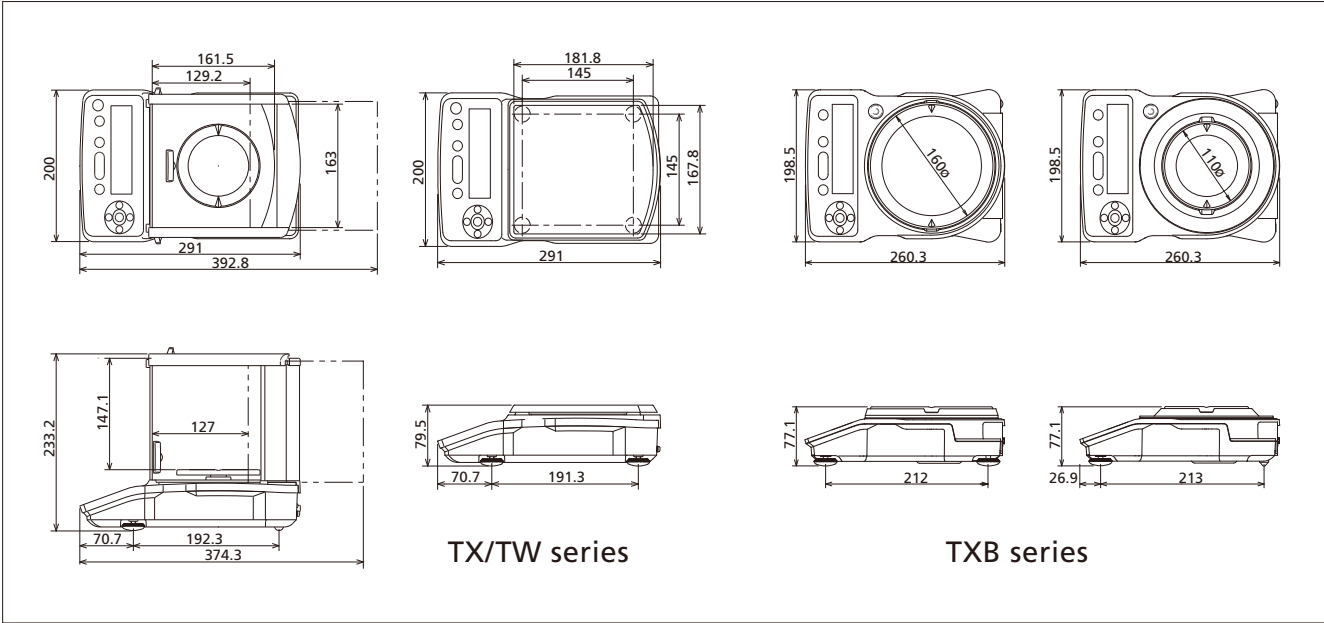
UW/UX Series



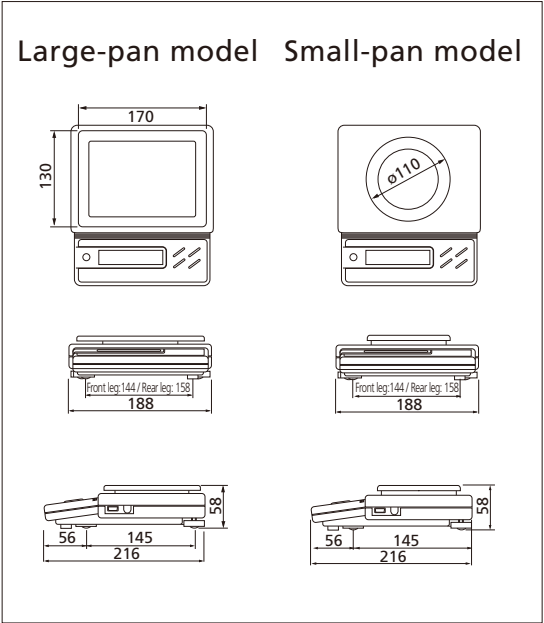
Physical Dimensions

Measurements in mm. 1mm=.03937"

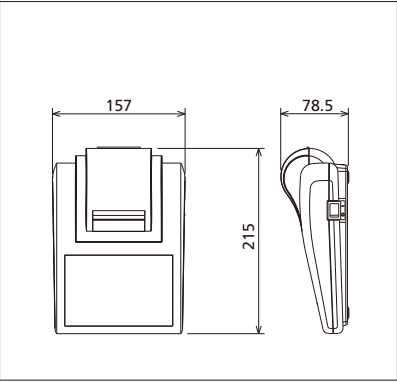
TW/TX/TXB/TWC/TXC Series



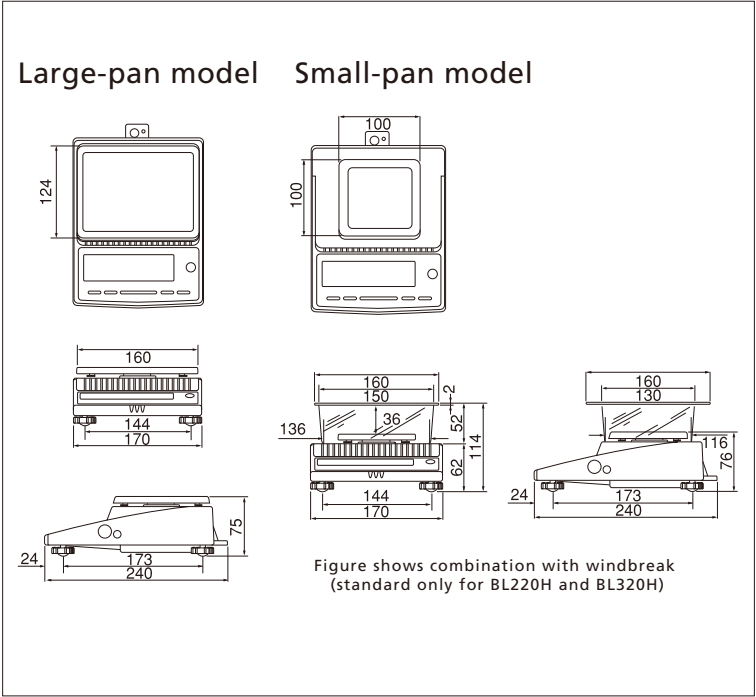
ELB Series



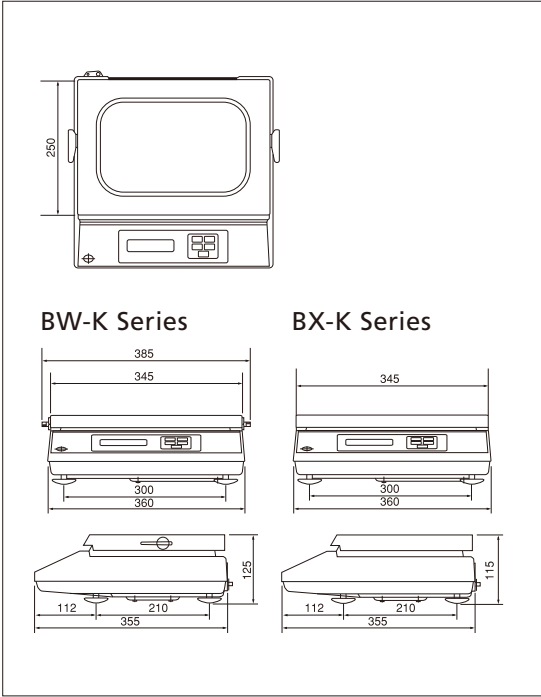
EP-80/EP-90



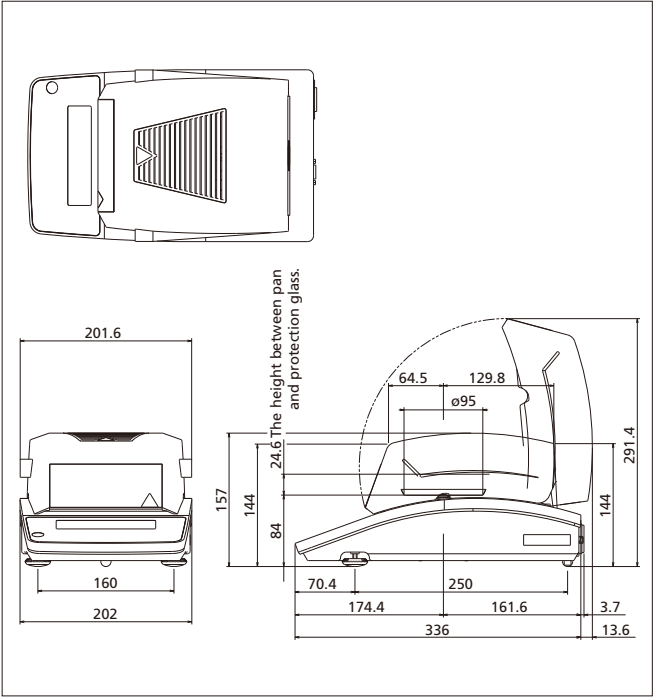
BL Series



BW-K/BX-K Series



MOC63u



MOC-120H

